CHAPTER 3

USE OR OCCUPANCY

780 CMR 301.0 GENERAL

301.1 Scope: The provisions of 780 CMR 3 shall control the classification of all buildings and structures as to use group.

301.2 Application of other laws: The provisions of 780 CMR 3 shall not be deemed to nullify any provisions of the zoning law***, ordinance of any municipality in the Commonwealth of Massachusetts,*** or any other statute of the jurisdiction pertaining to the location or occupancy of buildings, except as is specifically required by the provisions of 780 CMR.

780 CMR 302.0 CLASSIFICATION

302.1 General: All structures shall be classified with respect to occupancy in one or more of the use groups listed below. Where a structure is proposed for a purpose which is not specifically provided for in 780 CMR, such structure shall be classified in the
use group which the occupancy most nearly resembles.

1. Assembly: (see 780 CMR 303.0) — Use Groups A-1, A-2, A-3, A-4 and A-5
2. Business: (see 780 CMR 304.0) — Use Group B
3. Educational: (see 780 CMR 305.0) — Use Group E
4. Factory and Industrial: (see 780 CMR 306.0) — Use Groups F-1 and F-2
5. High Hazard (see 780 CMR 307.0): — Use Groups H-1, H-2, H-3 and H-4
6. Institutional: (see 780 CMR 308.0) — Use Groups I-1, I-2 and I-3
7. Mercantile: (see 780 CMR 309.0) — Use Group M
8. Residential: (see 780 CMR 310.0) — Use Groups R-1, R-2, R-3, R-4 and ***R-5***
9. Storage: (see 780 CMR 311.0) — Use Groups S-1 and S-2
10. Utility and Miscellaneous (see 780 CMR 312.0) — Use Group U

302.1.1 Specific occupancy areas: Specific occupancy areas which are incidental to the main use group shall be separated and protected in accordance with Table 302.1.1 and shall be classified in accordance with the main use group of the portion of the building in which the specific occupancy area is located. Where the building, or portion thereof, containing the specific occupancy area is required to be protected with an *automatic fire suppression system*, the separation alternative of Table 302.1.1 shall not apply.

Exception: Specific occupancy areas within and serving a dwelling unit are not required to comply with 780 CMR 302.1.1.

Table 302.1.1
SPECIFIC OCCUPANCY AREAS

Room or area[b]	Separation[a]/protection
All use groups:	
Paint shops in occupancies oth- er than Use Group F employing hazardous materials in quanti-ties less than those which cause classification as Use Group H	2 hours; or 1 hour and automatic fire sup-pression system
Waste and soiled linen collec-tion rooms and chute term-ination rooms	1 hour and automatic fire suppression system
Waste and soiled linen chute access rooms	1 hour
Boiler and furnace rooms	1 hour; or automatic fire suppression system
Incinerator rooms	2 hours and automatic fire suppression system
Use Groups A, B, E, I-1, R-1, R-2:	1 hour; or automatic fire suppression system with smoke partitions
Storage rooms more than 50 square feet in area but not more than 100 square feet in area	
Storage rooms more than 100 square feet in area	Automatic fire suppres-sion system with smoke partitions
Physical plant maintenance shop and workshop	2 hours; or 1 hour and au-tomatic fire suppression system
Use Groups I-2, I-3:	1 hour and automatic fire suppression system
Boiler and furnace rooms	
Handicraft shops, kitchens, and employee locker rooms	1 hour; or automatic fire suppression system with smoke partitions
Laundries greater than 100 square feet in area	1 hour and automatic fire suppression system
Storage rooms more than 50 square feet in area but not more than 100 square feet in area	Automatic fire suppres-sion system with smoke partitions
Storage rooms more than 100 square feet in area	1 hour and automatic fire suppression system
Physical plant maintenance shop and workshop	1 hour and automatic fire suppression system
Use Group I-2:	

Gift/retail shops and laborator-ies employing hazardous quantities less than those which cause classification as Use Group H	1 hour; or automatic fire suppression system with smoke partitions
Use Group I-3 padded cells	1 hour and automatic fire system

Note a. For requirements for fireresistance rated separations and smoke partitions see 780 CMR 302.1.1.1.

Note b. 1 square foot = 0.093 m^2.

302.1.1.1 Separation: Where Table 302.1.1 requires a fireresistance rated separation, the specific occupancy area shall be separated from the remainder of the building with *fire separation assemblies* (see 780 CMR 709.0). Where Table 302.1.1 requires smoke partitions, the smoke partitions shall be constructed of materials consistent with the type of construction and shall be capable of resisting the passage of smoke. The smoke partitions shall extend from the floor to the underside of the fireresistance rated floor/ceiling or roof/ceiling assembly or to the underside of the floor or roof deck above. All doors shall be self-closing or automatic-closing upon detection of smoke.

302.1.2 Accessory areas: Except for accessory areas of Use Group H in accordance with 780 CMR 302.1.2.1 and specific occupancy areas indicated in 780 CMR 302.1.1, where the area devoted to an accessory occupancy does not occupy more than 10% of any *fire area* nor more than 10% of the allowable area permitted by 780 CMR 503.0 based on the accessory use group, a *fire separation assembly* shall not be required between the main use group and accessory areas. The required type of construction and the automatic fire suppression requirements in 780 CMR 904.0 shall be based on the main use group of the *fire area*.

302.1.2.1 High-hazard uses: In buildings that are three stories or less in *height* and equipped throughout with an automatic suppression system in accordance with 780 CMR 9, an occupancy in Use Group F or S is permitted to have accessory areas of Use Group H-2, H-3 or H-4, provided that such areas do not occupy more than 10% of any *fire area* nor more than 10% of the allowable area permitted by 780 CMR 503.0 based on the use group of the accessory area. A *fire separation assembly* shall not be required between the F or S use group and the accessory H use group. The maximum quantity of *hazardous materials* within the accessory H use group shall not exceed twice the permitted exempt amount specified in Table 307.8(1) or Table 307.8(2). The required type of construction shall be based on the main use group of the *fire area*.

302.2 Mixed use: All buildings and structures that include more than one use group shall be further designated as a mixed use and shall comply with 780 CMR 313.0. Specific occupancy areas and accessory areas complying with 780 CMR 302.1.1 and 302.1.2, respectively, shall be classified in accordance with the main use group.

780 CMR 303.0 ASSEMBLY USE GROUPS

303.1 General: All structures which are designed or occupied for the gathering together of persons for purposes such as civic, social or religious functions, recreation, food or drink consumption or awaiting transportation, shall be classified as Use Group A-1, A-2, A-3, A-4 or A-5. A room or space used for assembly purposes by less than 50 persons and which is accessory to another use group shall be included as a part of that main use group. Other buildings or structures which accomodate less than 50 but would otherwise qualify as places of assembly, shall be classified in Use Group B. The term "Use Group A" shall include Use Groups A-1, A-2, A-3, A-4 and A-5.

303.2 Use Group A-1, theaters: This use group shall include all theaters and all other buildings and structures intended for the production and viewing of performing arts or motion pictures; and which are usually provided with fixed seats-including theaters, motion picture theaters and television and radio studios admitting an audience. *Stages* and *platforms* shall comply with 780 CMR 412.0.

303.3 Use Group A-2 structures: This use group shall include all buildings and places of public assembly, without theatrical *stage* accessories, designed for occupancy as dance halls, nightclubs and for similar purposes, including all rooms, lobbies and other spaces connected thereto with a common *means of egress* and entrance.

303.4 Use Group A-3 structures: This use group shall include all buildings with or without an auditorium in which persons assemble for amusement, entertainment or recreation purposes as well as incidental motion picture, dramatic or theatrical presentations, lectures or other similar purposes without theatrical *stage* other than a raised *platform*; and which are principally occupied without permanent seating facilities, including art galleries, exhibition halls, museums, lecture halls, libraries, restaurants other than nightclubs, and rec-reation centers; and buildings designed for similar assembly purposes, including passenger terminals.

303.5 Use Group A-4 structures: This use group shall include all buildings and structures which are occupied exclusively for the purpose of worship or other religious services.

303.6 Use Group A-5, outdoor assembly: This use group shall include structures utilized for

outdoor assembly intended for participation in or reviewing activities, including *grandstands* (780 CMR 1013.0), *bleachers* (780 CMR 1013.0), coliseums, stadiums, amusement park structures (780 CMR 413.0) and fair or carnival structures. Such structures shall comply with all pertinent provisions of 780 CMR.

780 CMR 304.0 BUSINESS USE GROUP

304.1 General: All buildings and structures which are occupied for the transaction of business, for the rendering of professional services, or for other services that involve stocks of goods, wares or mer-chandise in limited quantities which are incidental to office occupancies or sample purposes, shall be clas-sified as Use Group B. (Also see 780 CMR 303.1.)

304.2 List of business occupancies: The occupancies listed in Table 304.2 are indicative of and shall be classified as Use Group B.

Table 304.2
BUSINESS OCCUPANCIES

Airport traffic control towers	Fire stations
Animal hospitals, kennels, pounds	Florists and nurseries
Automobile and other motor vehicle showrooms	Laboratories; testing and research
Banks	Laundries; pickup and delivery stations and self-service
Barber shops	Police stations
Beauty shops	Post offices
Car wash	Print shops
Civic administration	Professional services; attorney, dentist, physician, engineer, etc.
Clinic, outpatient	Radio and television stations
Dry-cleaning; pickup and delivery stations and self-service	Telecommunications equipment building
Electronic data processing	

780 CMR 305.0 EDUCATIONAL USE GROUP

305.1 General: All structures other than those occupied for business training or vocational training, which accommodate more than five persons for educational purposes through the 12th grade, shall be classified as Use Group E.

Exception: A room or space occupied for educa-tional purposes by less than 50 persons, five years of age or more, and which is accessory to another use group shall be classified as a part of the main use group.

305.1.1 Day care facilities: ***A child day care cen-ter which provides care for children more than two years nine months shall be classified as use Group E.***

305.2 Business or vocational training: Structures occupied for business training or vocational training shall be classified in the same use group as the business or vocation taught.

780 CMR 306.0 FACTORY AND INDUSTRIAL USE GROUPS

306.1 General: All structures in which occupants are engaged in work or labor in the fabricating, assemb-ling or processing of products or materials, shall be classified as Use Group F-1 or F-2. This includes, among others, factories, assembling plants, industrial laboratories and all other industrial and manufac-turing occupancies. The term "Use Group F" shall include Use Groups F-1 and F-2.

306.2 Use Group F-1 structures: Factory and industrial occupancies which are not otherwise classified as low-hazard, Use Group F-2, shall be classified as a moderate-hazard factory and industrial occupancy, Use Group F-1. The manufacturing processes listed in Table 306.2 are indicative of and shall be classified as Use Group F-1.

Table 306.2
MODERATE-HAZARD FACTORY AND INDUSTRIAL OCCUPANCIES

Aircraft	Film, photographic
Appliances	Food processing
Athletic equipment	Furniture
Automobiles and other motor vehicles	Hemp and jute products
Bakeries	Laundries
Beverages, alcoholic	Leather and tanneries, excluding enameling or japanning
Bicycles	Machinery
Boat building	Millwork and woodworking, wood distillation
Boiler works	Motion picture and television filming
Brooms or brushes	Musical instruments
Business machines	Optical goods
Cameras and photo equipment	Paper mills or products
Canneries, including food products	Plastic products
Clothing	Printing or publishing
Condensed and powdered milk manufacture	Recreational vehicles
Construction and agricultural machinery	Refuse incinerators
Disinfectants	Shoes
Dry cleaning using other than flammable liquids in clean-ing or dyeing operations or other than classified in 780 CMR 307.0	Soaps and detergents
	Sugar refineries
	Textile mills, including canvas, cotton, cloth, bagging, burlap, carpets and rags
Electric light plants and power houses	Tobacco
Electrolytic reducing works	Trailers
Electronics	Upholstery and manufacturing shops
Engines, including rebuilding	

306.3 Use Group F-2 structures: Factory and industrial occupancies which involve the fabrication or manufacturing of noncombustible materials that, during finishing, packing or processing, do not contribute to a significant fire hazard, shall be classified as Use Group F-2. The manufacturing processes listed in Table 306.3 are indicative of and shall be classified as Use Group F-2.

Table 306.3
LOW-HAZARD FACTORY AND

INDUSTRIAL OCCUPANCIES

Beverages, nonalcoholic	Gypsum
Brick and masonry	Ice
Ceramic products	Metal fabrication and assembly
Foundries	Water pumping plants
Glass products	

780 CMR 307.0 HIGH-HAZARD USE GROUPS

307.1 General: All structures which are occupied for the manufacturing, processing, generation, storage or other use of *hazardous materials* in excess of the exempt quantities specified in 780 CMR 307.8 shall be classified as Use Group H- 1, H-2, H-3 or H-4 in accordance with the hazards presented by each material as described in 780 CMR 307.3 through 307.6. The term "Use Group H" shall include Use Groups H-1, H-2, H-3 and H-4.

307.1.1 Information required: Separate floor plans shall be submitted for buildings and structures with an occupancy in Use Group H, identifying the locations of anticipated contents and processes so as to reflect the nature of each occupied portion of every building and structure. A report identifying all *hazardous materials* including, but not limited to, materials of Use Group H to be stored or utilized, shall be submitted and the methods of protection from such hazards shall be indicated on the *construction documents*.

307.2 Definitions: The following words and terms shall, for the purposes of 780 CMR 3 and as used elsewhere in 780 CMR, have the meanings shown herein.

Aerosol: A product that is dispensed from an *aerosol* container by a propellant.

Aerosol container: Metal cans, glass or plastic bottles designed to dispense an aerosol. Metal cans shall be limited to a maximum size of 33.8 fluid ounces (1000 ml). Glass or plastic bottles shall be limited to a maximum size of four fluid ounces (118 ml).

Barricade: A structure that consists of a combination of walls, floor and roof, which is designed to withstand the rapid release of energy in an explosion and which is fully confined, partially vented or fully vented; or other effective method of shielding from *explosive* materials by a natural or artificial barrier.

Boiling point: The temperature at which the vapor pressure of a liquid equals the atmospheric pressure of 14.7 pounds per square inch (psia) or 760 mm of mercury. Where an accurate *boiling point* is unavailable for the material in question, or for mixtures which do not have a constant *boiling point*, for the purposes of this classification, the 10% of a distillation performed in accordance with ASTM D86 listed in ***Appendix A*** shall be used as the *boiling point* of the liquid.

Closed system: The use of a solid or liquid hazardous material in a closed vessel or system that remains closed during normal operations where vapors emitted by the product are not liberated outside of the vessel or system and the product is not exposed to the atmosphere during normal operations; and all uses of *compressed gases*. Examples of closed systems for solids and liquids include product conveyed through a piping system into a closed vessel, system or piece of equipment.

Combustible dusts: Dusts and any similar solid material sufficiently comminuted for suspension in still air which, when so suspended, is capable of self-sustained combustion.

Combustible fibers: Includes readily ignitable and free-burning fibers such as cotton, sisal, henequen, jute, hemp, tow, cocoa fiber, oakum, baled waste, baled wastepaper, kapok, hay, straw, excelsior, Spanish moss and other like material.

Combustible liquids: Any liquids having a *flash point* at or above 100°F (38°C) shall be known as Class II or III liquids. Combustible liquids shall be divided into the following classifications:

Class II: Liquids having *flash points* at or above 100°F (38°C) and below 140°F (60°C).

Class IIIA: Liquids having *flash points* at or above 140°F (60°C) and below 200°F (93°C).

Class IIIB: Liquids having *flash points* at or above 200°F (93°C).

Compressed gas: A gas or mixture of gases as contained having an absolute pressure exceeding 40 psi at 70°F (276 kPa at 21°C) or, regardless of the pressure at 70°F (21°C), having an absolute pressure exceeding 140 psi at 130°F (965 kPa at 54°C); or any liquid material having a vapor pressure exceeding 40 psi absolute at 100°F (276 kPa at 38°C) as determined by ASTM D323 listed in ***Appendix A***

Control area: Spaces within a building which are enclosed and bounded by exterior walls, *fire walls*, *fire separation assemblies* and roofs, or a combination thereof, where quantities of *hazardous materials* not exceeding the exempt amounts are stored, dispensed, used or handled.

Corrosive: A chemical that causes visible destruction of, or irreversible alterations in, living tissue at the point of contact. A chemical

shall be considered a corrosive if, when tested on the intact skin of albino rabbits by the test method described by DOTn 49 CFR; Part 173 listed in ***Appendix A***, such chemical destroys or changes irreversibly the structure of the tissue at the point

of contact following an exposure period of four hours. This term shall not refer to action on inanimate surface.

Cryogenic liquids (flammable or oxidizing): Any liquid that has a *boiling point* below -200°F (-129°C).

Deflagration: An exothermic reaction, such as the extremely rapid oxidation of a *flammable* dust or vapor in air, in which the reaction progresses through the unburned material at a rate less than the velocity of sound. A deflagration can have an explosive effect.

Detached storage building: A separate single-story building, without a *basement* or crawl space, used for the storage of *hazardous materials* and located an approved distance from all structures.

Detonation: An exothermic reaction characterized by the presence of a shock wave in the material which establishes and maintains the reaction. The reaction zone progresses through the material at a rate greater than the velocity of sound. The principal heating mechanism is one of shock compression. *detonation*s have an explosive effect.

Dispensing: The pouring or transferring of any material from a container, tank or similar vessel, whereby vapors, dusts, fumes, mists or gases are liberated to the atmosphere.

Explosive: Any chemical compound, mixture or device, the primary or common purpose of which is to function by explosion. The term includes, but is not limited to, dynamite, black powder, pellet powder, initiating explosives, detonators, safety fuses, squibs, detonating cord, igniter cord and igniters.

The term "explosive" includes any material determined to be within the scope of USC Title 18; Chapter 40 listed in ***Appendix A*** and also includes any material classified as an explosive by the Hazardous Material Regulations of DOTn 49 CFR listed in ***Appendix A***.

Flammable: Capable of being readily ignited from common sources of heat or at a temperature of 600°F (316°C) or less.

Flammable compressed-gas: Either a mixture of 13% or less (by volume) with air forms a *flammable* mixture, or the *flammable* range with air is wider than 12%, regardless of the lower limitation. These limitations shall be determined at atmospheric temperature and pressure.

Flammable liquids: Any liquid that has a *flash point* below 100°F (38°C), and has a vapor pressure not exceeding 40 psia (276 kPa) at 100°F (38°C). Flammable liquids shall be known as Class I liquids and shall be divided into the following classifications:

Class IA: Liquids having a flashpoint below 73°F (23°C) and having a *boiling point* below 100°F (38°C).

Class IB: Liquids having a *flash point* below 73°F (23°C) and having a *boiling point* at or above 100°F. (38°C).

Class IC: Liquids having a *flash point* at or above 73°F (23°C) and below 100°F (38 °C).

Flammable solid: A solid, other than a blasting agent or explosive, that is capable of causing fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing. or which has an ignition temperature below 212°F (100°C) or which burns so vigorously and persistently when ignited as to create a serious hazard. A chemical shall be considered a flammable solid as determined in accordance with the test method of CPSC 16 CFR; Part 1500.44 listed in ***Appendix A***, if it ignites and burns with a self-sustained flame at a rate greater than 0.1 inch (3 mm) per second along its major axis.

Flash point: The minimum temperature in degrees Fahrenheit at which a *flammable liquid* will give off sufficient vapors to form an ignitable mixture with air near the surface or in the container, but will not sustain combustion. The *flash point* of a liquid shall be determined by appropriate test procedure and apparatus as specified in ASTM D56 and ASTM D93 listed in ***Appendix A***.

Hazardous materials: Those chemicals or substances which are *physical hazards* or *health hazards* as defined and classified in 780 CMR 3 and the fire prevention code listed in ***Appendix A***, whether the materials are in usable or waste condition.

Health hazard: A classification of a chemical for which there is statistically significant evidence that acute or chronic health effects are capable of occurring in exposed persons. The term "health hazard" includes chemicals which are carcinogens, *toxic* or *highly toxic* agents, reproductive toxins, *irritants*, *corrosives*, *sensitizers*, hepatotoxins, nephrotoxins, neurotoxins, agents which are capable of acting on the hematopoietic system, and agents which damage the lungs, skin, eyes or mucous membranes.

Highly toxic: A chemical falling within any of the following categories is considered highly toxic.

1. A chemical that has a median lethal dose (LD_{50}) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.
2. A chemical that has a median lethal dose (LD_{50}) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.
3. A chemical that has a median lethal concentration (LC_{50}) in air of 200 parts per million by volume or less of gas or vapor, or two milligrams per liter or less of mist, fume or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

Incompatible materials: Materials which, when mixed, have the potential to react in a manner that generates heat, fumes, gases or by-products which are hazardous to life or property.

Irritant: A chemical, which is not *corrosive*, but which causes a reversible inflammatory effect on living tissue by chemical action at the point of contact. A chemical shall be considered an irritant if, when tested on the intact skin of albino rabbits by the test method of CPSC 16 CFR; Part 1500.41 listed in ***Appendix A*** for four hours exposure, it results in an empirical score of five or more. A chemical is an eye irritant if so determined by the procedure in CPSC 16 CFR; Part 1500.42 listed in ***Appendix A***.

Open system: The use of a solid or liquid *hazardous material* in a vessel or system that is continuously open to the atmosphere during normal operations and where vapors are liberated, or the product is exposed to the atmosphere during normal operations. Examples of open systems for solids and liquids include dispensing from or into open beakers or containers, dip tank and plating tank operations.

Organic peroxide: An organic compound that contains the bivalent double-bonded oxygen structure and which is considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms have been replaced by an organic radical.

Unclassified detonable: Organic peroxides which are capable of *detonation*. These peroxides present an extremely high explosion hazard through rapid explosive decomposition.
Class I: Class I organic peroxides are capable of *deflagration*, but not *detonation*. These peroxides present a high explosion hazard through rapid decomposition.
Class II: Class II organic peroxides burn very rapidly and present a severe reactivity hazard.
Class III: Class III organic peroxides burn rapidly and present a moderate reactivity hazard.

Oxidizer: A chemical other than a blasting agent or *explosive* that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.
Class 4: An *oxidizer* that can undergo an explosive reaction due to contamination or exposure to thermal or physical shock. Additionally, the oxidizer will enhance the burning rate and is capable of causing spontaneous ignition of combustibles.
Class 3: An *oxidizer* that will cause a severe increase in the burning rate of combustible materials with which the oxidizer comes in contact or that will undergo vigorous self-sustained decomposition due to contamination or exposure to heat.
Class 2: An *oxidizer* that will cause a moderate increase in the burning rate or that is capable of causing spontaneous ignition of combustible materials with which the *oxidizer* comes in contact.
Class 1: An *oxidizer* whose primary hazard is a slight increase in the burning rate but which does not cause spontaneous ignition when the oxidizer comes in contact with combustible material.

Physical hazard: A chemical for which there is evidence in the referenced standards listed in ***Appendix A*** that it is a *combustible liquid, compressed gas, cryogenic, explosive, flammable gas, flammable liquid, flammable solid, organic peroxide, oxidizer, pyrophoric or unstable (reactive) or water-reactive material*.

Pyrophoric: A material that will spontaneously ignite in air at or below a temperature of 130°F (54°C).

Radioactive material: Any material or combination of material that spontaneously emits ionizing radiation.

Sensitizer: A chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical.

Tires, bulk storage of: Storage of 10,000 or more average-sized passenger vehicle tires weighing approximately 25 pounds (11 kg) each (see 780 CMR 307.5).

Toxic: A chemical that is within any of the following categories shall be considered toxic:

1. A chemical that has a median lethal dose

(LD_{50}) of more than 50 milligrams per kilogram but not more than 500 milligrams per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.

2. A chemical that has a median lethal dose (LD_{50}) of more than 200 milligrams per kilogram but not more than 1,000 milligrams per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.
3. A chemical that has a median lethal concentration (LC_{50}) in air of more than 200 parts per million but not more than 2,000 parts per million by volume of gas or vapor, or more than two milligrams per liter but not more than 20 milligrams per liter of mist, fume or dust, when administered by continuous inhalation for one hour (or less if death occurs within I hour) to albino rats weighing between 200 and 300 grams each.

Unstable (reactive) material: A material which, in the pure state or as commercially produced, will vigorously polymerize, decompose or condense, become self-reactive, or otherwise undergo a violent chemical change under conditions of shock, pressure or temperature.

Class 4: Materials that in themselves are readily capable of *detonation* or explosive decomposition or explosive reaction at normal temperatures and pressures. This class includes, among others, materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures.

Class 3: Materials that in themselves are capable of *detonation* or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation. This class includes, among others, materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures.

Class 2: Materials that readily undergo violent chemical change at elevated temperatures and pressures. This class includes, among others, materials that exhibit an exotherm at temperatures less than or equal to 150°C when tested by differential scanning calorimetry.

Class 1: Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures. This class includes, among others, materials that change or decompose on exposure to air, light or moisture, and materials that exhibit an exotherm at temperatures greater than 150°C, but less than or equal to 300°C, when tested by differential scanning calorimetry.

Water-reactive materials: A chemical that reacts with water to release a gas that is either *flammable* or presents a *health hazard*.

Class 3: Materials which react explosively with water without requiring heat or confinement.

Class 2: Materials which are capable of forming potentially explosive mixtures with water.

307.3 Use Group H-1 structures: All buildings and structures which contain materials that present a *detonation* hazard, shall be classified as Use Group H- 1. Such materials shall include but are not limited to:

Explosives
Organic Peroxides, unclassified detonable
Oxidizers, Class 4
Unstable (reactive) materials, Class 3 detonable, and Class 4
Detonable *pyrophoric* materials

307.4 Use Group H-2 structures: All buildings and structures which contain materials that present a *deflagration* hazard or a hazard from accelerated burning, shall be classified as Use Group H-2. Such materials shall include but are not limited to:

Combustible dusts
Combustible liquids, Class II and Class IIIA
Cryogenic liquids, flammable or oxidizing
Flammable gases
Flammable liquids
Organic peroxides, Class I and Class II
Oxidizers, Class 3
Oxidizing gases
Pyrophoric liquids, solids and gases, nondetonable
Unstable (reactive) materials, Class 3, nondetonable

307.5 Use Group H-3 structures: All buildings and structures which contain materials that readily support combustion or present a *physical hazard*, shall be classified as Use Group H-3. Such materials shall include but are not limited to:

Aerosols, except that Level 1 *aerosols* defined in the fire prevention code listed in ***Appendix A*** shall be classified as Use Group S-1 or F-1
Combustible fibers
Combustible liquids, Class IIIB
Flammable solids
Organic peroxides, Class III
Oxidizers, Class 1 and Class 2
Tires, bulk storage of
Unstable (reactive) materials, Class 1 and Class 2
Water-reactive materials, Class 2 and Class 3

307.6 Use Group H-4 structures: All buildings and structures which contain materials that are health hazards, shall be classified as Use Group H-4. Such materials shall include but are not

limited to:

Corrosives
Highly toxic materials
Irritants

Radioactive materials
Sensitizers
Toxic materials

307.7 Multiple hazards: All buildings and structures containing a material or materials representing hazards that are classified in one or more of Use Groups H-1, H-2, H-3 and H-4, shall conform to the code requirements for each of the use groups so classified.

307.8 Exceptions: The following shall not be classified in Use Group H, but shall be classified in the use group which they most nearly resemble. High-hazard materials of any quantity shall conform to the requirements of 780 CMR, including 780 CMR 417.0, and the fire prevention code listed in ***Appendix A***.

1. All buildings and structures which contain not more than the exempt quantities of high-hazard materials as shown in Tables 307 .8(1) and 307.8(2) provided that such buildings are maintained in accordance with the fire prevention code listed in ***Appendix A***.
2. Buildings utilizing *control areas* in accordance with 780 CMR 417.2 which contain not more than the exempt quantities of high-hazard materials as shown in Tables 307.8(1) and 307.8(2).
3. Buildings and structures occupied for the storage of 10,000 or less vehicle tires weighing approximately 25 pounds (11 kg) each, provided that such buildings are equipped throughout with an *automatic sprinkler system* in accordance with 780 CMR 906.2.1.
4. Buildings and structures occupied for the application of *flammable* finishes, provided that such buildings or areas conform to the requirements of 780 CMR 419.0 and NFiPA 33, NFiPA 34 and the fire prevention code listed in ***Appendix A***.
5. Rooms containing *flammable liquids* in tightly closed containers of 1-gallon capacity (0.0038 m) or less for retail sale or private utilization on the premises and in quantities not exceeding two gallons per square foot (0.082 m^3/m^2) of room area.
6. Retail paint salesrooms with quantities of paint not exceeding two-gallons per square foot (0.082 m^3/m^2) of room area.
7. *Closed systems* housing *flammable* or *combustible liquids* or gases utilized for the operation of machinery or equipment.
8. Cleaning establishments which utilize *combustible liquid* solvents having a *flash point* of 140°F (60°C) or higher in *closed systems* employing equipment listed by an *approved testing agency*, provided that this occupancy is separated from all other areas of the building by one-hour fireresistance rated *fire separation assemblies*.
9. Cleaning establishments which utilize a liquid solvent having a *flash point* at or above 200°F (93°C).
10. Liquor stores and distributors without bulk storage.
11. Refrigeration systems.
12. The storage or utilization of materials for agricultural purposes on the premises.
13. Stationary batteries utilized for facility emergency power, uninterrupted power supply or telecommunication facilities provided that the batteries are provided with safety venting caps and *ventilation* is provided in accordance with the mechanical code listed in ***Appendix A***.
14. *Corrosives, irritants* and *sensitizers* shall not include personal or household products in their original packaging used in retail display or commonly used building materials.
15. Buildings and structures occupied for *aerosol* manufacturing or storage shall be classified as Use Group F-1 or S-1, provided that such buildings conform to the requirements of NFiPA 30 and the fire prevention code listed in ***Appendix A***.

780 CMR 308.0 INSTITUTIONAL USE GROUPS

308.1 General: All structures in which people suffering from physical limitations because of health or age are harbored for medical or other care or treatment, or in which people are detained for penal or correction purposes, or in which the liberty of the inmates is restricted, shall be classified as Use Group I-1, I-2 or I-3. The term "Use Group I" shall include Use Groups I-1, I-2 and I-3.

308.2 Use Group I-1: ***Except as modified by the provisions of 780 CMR 4, Special Use and Occupancy***, this use group shall include buildings and structures which house six or more individuals who, because of age, mental disability or other reasons, must live in a supervised environment but who are physically capable of responding to an emergency situation without personal assistance. ***Except as specified otherwise by the requirements of 780 CMR 4, Special Use and Occupancy,*** where accommodating persons of the above description, the following types of facilities shall be classified as I-1 facilities, board and care facilities, half-way houses, group homes, social rehabilitation facilities, alcohol and drug centers and convalescent facilities. A facility such as the above with five or less occupants shall be classified as a residential use group.

308.3 Use Group I-2: This use group shall include buildings and structures used for medical, surgical,

psychiatric, nursing or custodial care on a 24-hour basis of six or more persons who are not capable of

self-preservation. Where accommodating persons of the above description, the following types of facilities shall be classified as I-2 facilities: hospitals, nursing homes (both intermediate care facilities and skilled nursing facilities), mental hospitals and detoxification facilities. A facility such as the above with five or less occupants shall be classified as a residential use group.

308.3.1 Child care facility: ***A child day care center which accommodates children two years nine months of age or less shall be classified as Use Group I-2.***

308.4 Use Group I-3: This use group shall include buildings and structures which are inhabited by six or more persons who are under some restraint or security. An I-3 facility is occupied by persons who are generally incapable of self-preservation due to
security measures not under the occupants' control. Where accommodating persons of the above description, the following types of facilities shall be classified as I-3 facilities: prisons, jails, reformatories, detention centers, correctional centers and prerelease centers. Buildings of Use Group I-3 shall be classified as one of the occupancy conditions indicated in 780 CMR 308.4.1 through 308.4.5 (see 780 CMR 410.0).

308.4.1 Occupancy Condition I: This occupancy condition shall include all buildings in which free movement is allowed from sleeping areas, and other spaces where access or occupancy is permitted, to the exterior via *means of egress* without restraint. An Occupancy Condition I facility shall be classified as Use Group R.

308.4.2 Occupancy Condition II: This occupancy condition shall include all buildings in which free movement is allowed from sleeping areas and any other occupied *smoke compartment* to one or more other *smoke compartments*. Egress to the exterior is impeded by locked *exits*.

308.4.3 Occupancy Condition III: This occupancy condition shall include all buildings in which free movement is allowed within individual *smoke compartments*, such as within a residential unit comprised of individual sleeping rooms and group activity spaces, where egress is impeded by remote-controlled release of *means of egress* from such *smoke compartment* to another *smoke compartment*

Table 307.8(1)
EXEMPT AMOUNTS OF HAZARDOUS MATERIALS, LIQUIDS AND CHEMICALS PRESENTING A PHYSICAL HAZARD MAXIMUM QUANTITIES PER CONTROL AREA[a,k]

Material	Class	Use Groups	Storage[b] solid pounds (cubic feet)	Storage[b] liquid gallons (pounds)	Storage[b] gas (Cubic feet)	Closed systems[b] Solid pounds (cubic feet)	Closed systems[b] Liquid gallons (pounds)	Closed systems[b] Gas cubic feet	Open systems[b] Solid pounds (cubic feet)	Open systems[b] liquid gallons (pounds)
Combustible[c] liquid	II IIIA IIIB	H-2 H-2 H-3	NA	120[d,e] 330[d,e] 13,200[e,f]	NA	NA	120[d] 330[d] 13,200[f]	NA	NA	30[d] 80[d] 3,300[f]
Conbustible dust pounds per 1,00 feet		H-2	1[g]	NA	NA	1[g]	NA	NA	1[g]	NA
Combustible fiber	loose Baled	H-3	(100) (1,000)	NA	NA	(100) (1,000)	NA	NA	(20) (200)	NA
Cryogenics, flammible or oxidizing		H-2	NA	45[d]	NA	NA	45[d]	NA	NA	10[d]
Explosives		H-1	1[e,h,ı]	(1)[e,h,ı]	NA	¼[h]	(¼)[h]	NA	¼[h]	(¼)[h]
Flammable gas	Gaseous Liquified	H-2	NA	NA 30[d,e]	1,000[d,e] NA	NA	NA 30[d,e]	750[d,e] NA	NA	NA
Flammible liquid[c]	IA IB IC	H-2	NA	30[d,e] 60[d,e] 90[d,e]	NA	NA	30[d] 60[d] 90[d]	NA	NA	10[d] 15[d] 20[d]
Combination (IA, IB, IC)		H-2	NA	120[d,e,j]	NA	NA	120[d,j]	NA	NA	30[d,j]
Flammible solid		H-2	125[d,e]	NA	NA	25[d]	NA	NA	25[d]	NA
Organic peroxide	UD I II III	H-1 H-2 H-3 H-3	1[e,h] 5[d,e] 50[d,e] 125[d,e]	(1)[e,h] (5)[d,e] (50)[d,e] (125)[d,e]	NA	¼[h] 1[d] 50[d] 125[d]	(¼)[h] (1)[d] (50)[d] (125)[d]	NA	¼[h] 1[d] 10[d] 25[d]	(¼)[h] (1)[d] (10)[d] (25)[d]
Oxidizer	4 3 2 1	H-1 H-2 H-3 H-3	1[e,h] 10[d,e] 250[d,e] 1,000[d,e]	(1)[e,h] (10)[d,e] (250)[d,e] (1,000)[d,e]	NA	¼[h] 2[d] 250[d] 1,000[d]	(¼)[h] (2)[d] (250)[d] (1,000)[d]	NA	¼[h] 2[d] 50[d] 200[d]	(¼)[h] (2)[d] (50)[d] (200)[d]
Oxidizer - gas	Gaseous Liquified	H-2	NA	NA 15[d,e]	1,500[d,e] NA	NA	NA (15)[d,e]	1,500[d,e] NA	NA	NA
Pyrophoric		H-2	4[e,h]	(4)[e,h]	50[e,h]	1[h]	(1)[h]	10[e,h]	0	0
Unstable (reactive)	4 3 2 1	H-1 H-1 or H-2 H-3 H-3	1[e,h] 5[d,e] 50[d,e] 125[d,e]	(1)[e,h] (5)[d,e] (50)[d,e] (125)[d,e]	10[d,h] 50[d,e] 250[d,e] 750[d,e]	¼[h] 1[d] 50[d] 125[f]	(¼)[h] (1)[d] (50)[d] (125)[f]	2[e,h] 10[d,e] 250[d,e] 750[d,e]	¼[h] 1[d] 10[d] 25[f]	(¼)[h] (1)[d] (10)[d] (25)[f]
Water reactive	3 2	H-3 H-3	5[d,e] 50[d,e]	(5)[d,e] (50)[d,e]	NA	5[d] 50[d]	(5)[d] (50)[d]	NA	1[d] 10[d]	(1)[d] (10)[d]

Note a. For use of control areas, see 780 CMR 417.2

Note b. The aggregate quantity in utilization and storage shall not exceed the quantity listed for storage.

Note c. The quantities of alcoholic beverages in retail sales occupancies shall not be limited provided the liquids are packaged in individual containers not exceeding 1 gallon. In retail sales and storage occupancies, the quantities of medicines, foodstuffs and cosmetics, containing not more than 50% by volume of water-miscible liquids and with the remainder of the solutions not being flammable, shall not be limited provided that such materials are packaged in individual containers not exceeding one gallon.

Note d. Maximum quantities shall be increased 100% in buildings equipped throughout with an automatic sprinkler system in accordance with 780 CMR 906.2.1. Where note e. Also applies, the

increase for both notes shall be applied accumulatively.

Note e. Quantities shall be increased 100% when stored in approved cabinets, gas cabinets, fume hoods, exhausted enclosures, or safety cans as specified in the fire prevention code listed in ***Appendix A***. Where note d. also applies, the increase for both notes shall be applied accumulatively.

Note f. The permitted quantities shall not be limited in a building equipped throughout with an automatic sprinkler system in accordance with 780 CMR 906.2.1.

Note g. A dust explosion potential is considered to exist where 1 pound or more of combustible dust per 1,000 cubic feet of volume is normally in suspension or could be put into suspension in all or a portion of an enclosure or inside pieces of equipment. This also includes combustible dust which accumulates on horizontal surface inside buildings or equipment and which could be put into suspension be an accident, sudden force or sudden explosion.

Note h. Permitted only in buildings equipped throughout with an automatic sprinkler system in accordance with 780 CMR 906.2.1.

Note i. One pound of black sporting powder and 20 pounds of smokeless powder are permitted in sprinklered or unsprinklered buildings.

Note j. Containing not more than the exempt amounts of Class I-A, Class I-B or Class I-C flammable liquids.

Note k. Quantities in parenthesis indicate quantity units in parenthesis at the head of each column. 1 cubic foot = 0.028 m^3; 1 pound = 0.454 kg; 1 gallon = 0.00379 m^3

Table 307.8(2)
EXEMPT AMOUNTS OF HAZARDOUS MATERIALS, LIQUIDS AND CHEMICALS PRESENTING A HEALTH HAZARD
MAXIMUM QUANTITIES PER CONTROL AREA[a,b,h]

	Storage[c]			Closed systems[c]			Open systems[c]	
Material	Solid pounds[d,e]	Liquid gallons (pounds)[d,e]	Gas cubic feet	Solid pounds[d]	Liquid gallons (pounds)[d]	Gas cubic feet	Solid pounds[d]	Liquid gallons (pounds)[d]
Corrosive	5,000	500	810[d,e]	5,000	500	810[d,e]	1,000	100
Highly toxic	1	(1)	20[f]	1	(1)	20[f]	¼	(¼)
Irritant	5,000	500	810[d,e]	5,000	500	810[d,e]	1,000	100
Radioactive[g]	25 rem - unsealed source 100 rem - sealed source			100 rem - sealed source			25 rem - sealed source	
Sensitizer	5,000	500	810[d,e]	5,000	500	810[d,e]	1,000	100
Toxic	500	(500)	810[d,e]	500	(500)	810[d,e]	125	(125)
Other health hazards	5,000	500	810[d,e]	5,000	500	810[d,e]	1,000	100

Note a. For use of control areas, see 780 CMR 417.2

Note b. In retail sales occupancies, the quantities of medicines, foodstuffs and cosmetics, containing not more than 50% by volume of water-miscible liquids and with the remainder of the solutions not being flammable, shall not be limited provided that such materials are packaged in individual containers not exceeding 1 gallon.

Note c. The aggregate quantity in utilization and storage shall not exceed the quantity listed for storage.

Note d. Maximum quantities shall be increased 100% in buildings equipped throughout with an automatic sprinkler system in accordance with 780 CMR 906.2.1. Where note e. also applies, the increase for both notes shall be applied accumulatively.

Note e. Maximum quantities shall be increased 100% when stored in approved storage cabinets, gas cabinets, fume hoods, exhausted enclosures, or safety cans as specified in the fire prevention code listed in ***Appendix A***. Where note d. also applies, the increase for both notes shall be applies accumulatively.

Note f. Permitted only when stored in approved exhausted gas cabinets, exhausted enclosures or fume hoods.

Note g. Maximum dosage permitted in any single exposure.

Note h. Quantities in parenthesis indicate quantity units in parenthesis at the head of each column. 1 cubic foot = 0.028 m^3; 1 pound = 0.454 kg; 1 gallon = 0.00379 m^3

308.4.4 Occupancy Condition IV: This occupancy condition shall include all buildings in which free movement is restricted from an occu-pied space. Remote-controlled release is provided to permit movement from all sleeping rooms, activity spaces and other occupied areas within the *smoke compartment* to other *smoke compartments*.

308.4.5 Occupancy Condition V: This occupancy condition shall include all buildings in which free movement is restricted from an occupied space. Staff-controlled release is provided to permit movement from all sleeping

rooms, activity spaces and other occupied areas within the *smoke compartment* to other *smoke compartments*.

780 CMR 309.0 MERCANTILE USE GROUP

309.1 General: All buildings and structures which are occupied for display and sales purposes involving stocks of goods, wares or merchandise incidental to such purposes and open to the public, shall be classified as Use Group M. This includes, among others, retail stores, automotive service stations, shops, salesrooms and markets. An automotive service station is that portion of a property where motor fuels are stored and dispensed

from fixed equipment into the fuel tanks of motor vehicles or approved containers, including any building used for the sale of automotive accessories, or for minor automotive repair work. Minor repairs include the exchange of parts, oil changes, engine tune-ups and similar routine maintenance work. Retail sales of *hazardous materials* shall comply with 780 CMR 307.8 ***or 780 CMR 426, as applicable***.

780 CMR 310.0 RESIDENTIAL USE GROUPS

310.1 General: All structures in which individuals live, or in which sleeping accommodations are provided (with or without dining facilities), excluding those that are classified as institutional occupancies, shall be classified as Use Group R-1, R-2, R-3, R-4 or ***R-5***. The term "Use Group R" shall include Use Groups R-1, R-2 and R-3, R-4 and R-5.

Note: Assisted Living Residences which are certified as such by the Executive Office of Elder Affairs pursuant to M.G.L. c. 19D shall be classified in the residential use group R-1, R-2, R-3 or R-4 as applicable. Portions of an assisted Living Residence which are used for any use other than residential shall be classified in accordance with the intended use.

310.2 Definitions: The following words and terms shall, for the purposes of 780 CMR 3 and as used elsewhere in 780 CMR, have the meanings shown herein.

Dwellings:

Assisted Living Residence: A residence licensed by the Executive Office of Elder Affairs pursuant to M.G.L. c. 19D.

Boarding house: A building arranged or used for lodging for compensation, with or without meals, and not occupied as a single unit.

Dormitory: A space in a building where group sleeping accommodations are provided in one room, or in a series of closely associated rooms.

Dwelling unit: A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

Hotel: Any building containing six or more guest rooms, intended or designed to be used, or which are used, rented or hired out to be occupied or which are occupied for sleeping purposes by guests.

Lodging house: Refer to M.G.L. c. 140, § 22

Motel: A hotel as defined in 780 CMR.

Multiple dwelling: A building or portion thereof containing more than two *dwelling units* and not meeting the requirements for a *multiple single dwelling.*

Multiple single dwelling: A building or portion thereof containing more than two *dwelling units* (see 780 CMR 310.5)

One-family dwelling: A building containing one *dwelling unit* but not a *lodging house* (see M.G.L. c. 140, § 22).

Two-family dwelling: A building containing two *dwelling units* but not *lodging house* (see M.G.L. c. 140, § 22).

310.3 Use Group R-1 structures: This use group shall include all *hotels, motels, boarding houses* and similar buildings arranged for shelter and sleeping accommodations and in which the occupants are primarily transient in nature, occupying the facilities for a period of less than 30 days.

310.4 Use Group R-2 structures: This use group shall include all *multiple dwellings* having more than two *dwelling units*, except as provided for in 780 CMR 310.5 for multiple *single dwelling units*, and shall also include all *boarding houses* and similar buildings arranged for shelter and sleeping accommodations in which the occupants are primarily not transient in nature.

310.4.1 Dormitories: A *dormitory* facility which accommodates more than five persons more than 2½ years of age shall be classified as Use Group R-2.

310.5 Use Group R-3 structures: This use group shall include all buildings arranged for occupancy as *one- or two-family dwellings*, including *multiple single family dwellings* where each unit has two independent *means of egress* not common to any other *dwelling unit*, and where each *dwelling unit* is separated from adjoining dwelling units by two-hour *fire separation assemblies* (see 780 CMR 709.0). Use group R-3 structures are not *lodging houses* (see M.G.L. c. 140, § 22).

Exceptions

1. In *multiple single-family dwellings* that are equipped throughout with an approved *automatic sprinkler system* installed in accordance with 780 CMR 906.2.1 or 906.2.2, the fireresistance rating of the *dwelling unit* separation shall not be less than one hour. *Dwelling unit* separation walls shall be constructed as *fire partitions* (see 780 CMR 711.0).
2. In multiple *single-family dwellings* that are equipped throughout with an approved *automatic sprinkler system* installed in accordance with 780 CMR 906.2.3, a two-hour *fire separation assembly* shall be provided between each pair of *dwelling unit*s. The fireresistance rating between each *dwelling unit* shall not be less than one hour and shall be constructed as a *fire partition.*

310.5.1 Family day-care home: A family day-care home as defined by M.G.L. c.28A, §. 9, shall be classified as use group R-3 or R-4. Such facility shall not accommodate more than six children.

310.6 Use Group R-4 structures: This use group shall include all detached *one-* or *two-family dwellings* not more than three stories in *height*, and the *accessory structures*.. All such structures shall be designed in accordance with 780 CMR 36 or in accordance with the requirements of 780 CMR applicable to Use Group R-3.

310.7 Use Group R-5 structures: This use group shall include all buildings arranged for use as limited group residences in accordance with the requirements of 780 CMR (see 780 CMR 4).

780 CMR 311.0 STORAGE USE GROUPS

311.1 General: All structures which are primarily used for the storage of goods, wares or merchandise shall be classified as Use Group S-1 or S-2. This includes, among others, warehouses, storehouses and freight depots. The quantity of *hazardous materials* in storage shall comply with 780 CMR 307.8. The term "Use Group S" shall include Use Groups S-1 and S-2.

311.2 Moderate-hazard storage, Use Group S-1: Buildings occupied for the storage of moderate-hazard contents which are likely to burn with moderate rapidity, but which do not produce either poisonous gases, fumes or *explosives* including, among others, the materials listed in Table 311.2, shall be classified as Use Group S-1. A motor vehicle repair garage is that portion of a property wherein major repairs, such as engine overhauls, painting or body work, are performed on motorized vehicles.

Table 311.2
MODERATE-HAZARD STORAGE OCCUPANCIES

Bags, cloth, burlap and paper	Linoleum
Bamboo and rattan	Livestock shelters
Baskets	Lumber yards
Belting, canvas and leather	Motor vehicle repair garages
Books and papers in rolls and packs	Petroleum warehouses for storage of lubricating oils with a flash point of 200°F or higher
Boots and shoes	Photo engraving
Buttons, including cloth covered, pearl or bone	Public garages (Group 1) and stables
Cardboard and cardboard boxes	Silk
Clothing, woolen wearing apparel	Soap
Cordage	Sugar
Furniture	Tobacco, cigars, cigarettes and snuff
Furs	Upholstering and mattress manufacturing
Glue, mucilage, paste and size	Wax candles
Horn and combs, other than celluloid	
Leather, enameling or japanning	

311.3 Low-hazard storage, Use Group S-2: Low-hazard storage occupancies shall include buildings occupied for the storage of noncombustible materials, and of low-hazard wares that do not ordinarily burn rapidly such as products on wood pallets or in paper cartons without significant amounts of combustible wrappings, but with a negligible amount of plastic trim such as knobs, handles or film wrapping. Such occupancies shall be classified as Use Group S-2 including, among others, the materials listed in Table 311.3.

Table 311.3
LOW-HAZARD STORAGE OCCUPANCIES

Asbestos	Gypsum board
Beer or wine up to 12% alcohol in metal, glass or ceramic containers	Inert pigments
Cement in bags	Ivory
Chalk and crayons	Meats
Dairy products in nonwaxed coated paper containers	Metal cabinets
Dry cell batteries	Metal desks with plastic tops and trim
Electrical coils	Metal parts
Electrical motors	Metals
Food products	Mirrors
Foods in noncombustible containers	New empty cans
Fresh fruits and vegetables in nonplastic trays or containers	Oil filled and other types of distribution transformers
Frozen foods	Open parking structures
Glass	Porcelain and pottery
Glass bottles, empty or filled with noncombustible liquids	Public garages (Group 2)
	Stoves
	Talc and soapstone
	Washers and dryers

780 CMR 312.0 UTILITY AND MISCELLANEOUS USE GROUP

312.1 General: Buildings and structures of an accessory character and miscellaneous structures not classified in any specific use group shall be constructed, equipped and maintained to conform to the requirements of 780 CMR commensurate with the fire and life hazard incidental to their occupancy. Use Group U shall include fences over six feet (1829 mm) high, tanks, cooling towers, retaining walls and buildings such as *private garages*, carports, sheds and agricultural buildings.

780 CMR 313.0 MIXED USE GROUPS

313.1 Two or more use groups: Where a building

is occupied by two or more occupancies not included in the same use group, the building or portion thereof shall comply with 780 CMR 313.1.1, 313.1.2 or 313.1.3 or with combinations of 780 CMR 313.1.1, 313.1.2 and 313.1.3, except that occupancies in Use Group H shall be separated from all other use groups in accordance with 780 CMR 313.1.2 or 313.1.3. Buildings that include an open parking structure located beneath an A, I, B, M or R Use Group shall comply with 780 CMR 313.1.1, 313.1.2, 313.1.3 or 313.2.

Exception: *fire area*s of Use Group H-1 shall be in separate and detached buildings and structures in accordance with 780 CMR 707.1.1.

313.1.1 Nonseparated use groups: Each portion of the building shall be individually classified as to use. The required type of construction for the building shall be determined by applying the *height* and *area* limitations for each of the applicable use groups to the entire building. The most restrictive type of construction, so determined, shall apply. The other requirements of 780 CMR shall apply to each portion of the building based on the use group of that occupancy except that the most restrictive applicable provisions of 780 CMR 403.0 and 780 CMR 9 shall apply to these nonseparated use groups. A *fire separation assembly* is not required between use groups, except as required by other sections of 780 CMR.

313.1.2 Separated use groups: Each portion of the building shall be individually classified in a use group and shall be completely separated from adjacent *fire area*s by fire separation assemblies (see 780 CMR 709.0) and floor/ceiling assemblies (see 780 CMR 713.0) having a fireresistance rating determined in accordance with Table 313.1.2, for the use groups being separated. Each *fire area* shall comply with the code based on the use group of that space. Each *fire area* shall comply with the *height* limitations of 780 CMR 503.0 based on the use of that space and the type of construction classification. In each story, the *building area* shall be such that the sum of the ratios of the floor *area* of each use group divided by the allowable *area* from 780 CMR 503.0 for each use group shall not exceed one.

Exception: Where the building is equipped throughout with an *automatic sprinkler system* in accordance with 780 CMR 906.2.1, the required fireresistance rating of *fire separation assemblies* separating areas of other than Use Group H, shall be reduced from those indicated in Table 313.1.2 by one hour but to not less than one hour and to not less than that required by Table 602 for floor construction.

313.1.3 Separate buildings: Each use group shall be considered a separate building where each such use group is completely separated from adjacent use groups by *fire walls* having a fireresistance rating corresponding to that required by Table 602. Each building shall then comply with the provisions of 780 CMR applicable to the use group of that building.

313.2 Open parking structures beneath other use groups: Open parking structures constructed under Use Groups A, I, B, M and R shall not exceed the *height* and *area* limitations permitted under 780 CMR 406.0. The *height* and *area* of the portion of the building above the open parking structure shall not exceed the limitations in 780 CMR 503.0 for the upper use group. The *height*, in both feet and stories, of the portion of the building above the open parking structure shall be measured from *grade plane* and shall include both the open parking structure and the portion of the building above the parking structure.

Fire separation assemblies between the parking occupancy and the upper occupancy shall correspond to the required fireresistance rating prescribed in Table 313.1.2 for the uses involved. The type of construction shall apply to each occupancy individually, except that all structural members-including main bracing within the open parking structure which is necessary to support the upper occupancy-shall be protected with the more restrictive fire resistive assemblies of the occupancies involved as shown in Table 602. Exit facilities for the upper occupancy shall conform to 780 CMR 10 and shall be separated from the parking area by fire separation walls having at least a two-hour fireresistance rating as required by Table 602 and self-closing *doors* complying with 780 CMR 716.0. *means of egress* from the open parking facility shall comply with 780 CMR 1010.5.

313.3 Use Group R: In buildings of Type 2C, 3B or 5B construction with an occupancy in Use Group R, the first floor shall not be occupied for Use Groups B and M, unless the floor/ceiling assembly and the enclosure walls are protected to afford a one-hour fireresistance rating and the *exits* from the residential floors are separately enclosed in accordance with the requirements of 780 CMR 10.

Table 313.1.2
FIRERESISTANCE RATING REQUIREMENTS FOR FIRE SEPARATION ASSEMBLIES BETWEEN FIRE AREAS[a]

Use Group

NP- Not Permitted
NA - Not Applicable

		A-1	A-2	A-3	A-4	A-5	B	E	F-1	F-2	H-1	H-2	H-3	H-4	I-1	I-2	I-3	M	R-1	R-2	R-3	S-1	S-2	U
	A-1	2	3	2	2	2	2	2	2	2	NP	4	3	2	2	3	3	2	2	2	2	2	2	NA
	A-2		3	3	3	3	3	3	3	3	NP	4	3	3	3	3	3	3	3	3	3	3	3	NA
	A-3			2	2	2	2	2	2	2	NP	4	3	2	2	3	3	2	2	2	2	2	2	NA
	A-4				2	2	2	2	2	2	NP	4	3	2	2	3	3	2	2	2	2	2	2	NA
	A-5					NA	2	2	2	2	NP	4	3	2	2	3	3	2	2	2	2	2	2	NA
	B						2	2	2	2	NP	4	3	2	2	3	3	2	2	2	2	2	2	NA
	E							2	2	2	NP	4	3	2	2	3	3	2	2	2	2	2	2	NA
	F-1								2	2	NP	4	3	2	2	3	3	2	2	2	2	2	2	NA
	F-2									2	NP	4	3	2	2	3	3	2	2	2	2	2	2	NA
U	H-1										NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NA
S	H-2											4	4	4	4	4	4	4	4	4	4	4	4	NA
E	H-3												3	3	3	3	3	3	3	3	3	3	3	NA
	H-4													2	2	2	2	2	2	2	2	2	2	NA
G	I-1														2	3	3	2	2	2	2	2	2	NA
R	I-2															3	3	3	3	3	3	3	3	NA
O	I-3																3	3	3	3	3	3	3	NA
U	M																	2	2	2	2	2	2	NA
P	R-1																		2	2	2	2	2	NA
	R-2																			2	2	2	2	NA
	R-3																				2	2	2	NA
	S-1																					2	2	NA
	S-2																						2	NA
	U																							NA

Note a. Fire resistance ratings are expressed in hours.

NON-TEXT PAGE